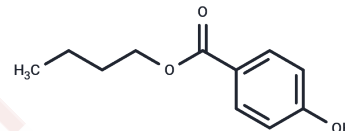


## Butylparaben

## Chemical Properties

|                   |   |
|-------------------|---|
| CAS No. :         | 94-26-8   |
| Formula:          | C <sub>11</sub> H <sub>14</sub> O <sub>3</sub>  |
| Molecular Weight: | 194.23  |
| Storage:          | Powder: -20°C for 3 years   In solvent: -80°C for 1 year<br>Actual storage temperature shall be subject to the COA. |



## Biological Description

|               |  |
|---------------|--|
| Description   | Butylparaben (Butyl 4-hydroxybenzoate) is a standardized chemical allergen, increasing histamine release, and cell-mediated immunity.  |
| Targets(IC50) | Endogenous Metabolite,Antibacterial,Antibiotic,DNA/RNA Synthesis   |
| In vitro      | After butylparaben treatment, vimentin filaments in Sertolicells are disrupted. Sertoli cell cytoskeleton responds to butylparaben by exhibiting a marked collapse in vimentin filaments distribution[1].  |
| In vivo       | Butylparaben induces collapse of Sertoli cell vimentin filaments in vivo[1]. Exposure of a postweaning mammal to butylparaben had an adverse effect on the secretion of testosterone and in the functions of the male reproductive system[2].  |
| Cell Research | Mixed cultures of Sertoli and spermatogenic cells are prepared from three-week-old SD rats. Single cells are obtained by gravity sedimentation and use of 50% trypsin-EDTA. Cells are finally suspended at a concentration of 1 × 10 <sup>8</sup> cell/ml and maintained for 24 h in Dulbecco's modified Eagle medium supplemented with 100 U/ml penicillin, 100 µg/ml streptomycin, and 10% fetal bovineserum. Thereafter, cells are maintained in serum-freemedium, which is changed every 24 h. At 72 h, spermatogenic cells are removed by treatment with hypotonic Tris buffer (20 mMTris-HCl, pH 7.4) for 5 min. The Sertoli cell-enriched cultures obtained are then maintained in serum-free medium for 24 h before being reseeded onto chamber slides. The samples are cultured for a further 5 days. Subsequently, they are exposed to 0, 1, 100 and 1000 nmol/ml butylparaben for 6 and 24 h. Some slides are stained with 0.5% toluidine blue for light microscopic observations, whereas the rest are used for vimentin immuno-histochemical analysis. (Only for Reference) |

## Solubility Information

|                     |   |
|---------------------|---|
| Solubility          | H <sub>2</sub> O: 35 mg/mL (180.2 mM),Sonication is recommended.<br>DMSO: 257.5 mg/mL (1325.75 mM),Sonication is recommended.<br>Ethanol: 36 mg/mL (185.35 mM),Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble)                        |
| In vivo Formulation | 10% DMSO+90% Saline: 10 mg/mL (51.49 mM),Suspension.<br><i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and</i> |

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|                     |   |
|---------------------|---|
| In vivo Formulation | <i>used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i> |
|---------------------|---|

### Preparing Stock Solutions

|       | 1mg       | 5mg        | 10mg       |
|-------|-----------|------------|------------|
| 1 mM  | 5.1485 mL | 25.7427 mL | 51.4854 mL |
| 5 mM  | 1.0297 mL | 5.1485 mL  | 10.2971 mL |
| 10 mM | 0.5149 mL | 2.5743 mL  | 5.1485 mL  |
| 50 mM | 0.103 mL  | 0.5149 mL  | 1.0297 mL  |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Alam MS, et al. Acta Histochem. 2014, 116(5):682-687.

Oishi S, et al. Toxicol Ind Health. 2001, 17(1):31-39.

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